

practice can result in overfertilization, affecting crop yields and increasing the pollutant runoff from fields.

Records of the application of manure and wastewater must be maintained on site. These records are: (1) The expected crop yields; (2) the date manure, litter, or process wastewater is applied to each field; (3) the weather conditions at the time of application and 24 hours before and after application; (4) test methods used to sample and analyze manure, litter, process wastewater, and soil; (5) results from manure and soil sampling; (6) explanation of the basis for determining manure application rates, as provided in the technical standards established by the Director; (7) the calculations showing the total nitrogen and phosphorus to be applied to each field, including sources other than manure, litter, or process wastewater; (8) total amount of nitrogen and phosphorus actually applied to each field, including documentation of calculations of the total amount applied; (9) the method used to apply the manure, litter, or process wastewater; and (10) dates of manure application equipment inspection. Crop yields and the manure and soil testing data, as well as records on applications conducted in previous years, are used to determine whether to apply manure on a nitrogen or phosphorus basis and the amount of nutrients to be applied. The CAFO and the permitting authority will use the remaining land application records to track the amount of nutrients applied and to ensure that application occurs consistent with the nutrient management plan.

EPA believes the land application rates, the 100-foot setback (or the use of equivalent practices authorized by the compliance alternative), and the other land application BMPs included in this rule will ensure that manure, litter, and other process wastewaters are applied in a manner consistent with appropriate agricultural utilization of the nutrients in manure, litter, and other process wastewaters. Effluent limitations in the form of BMPs are particularly suited to the regulation of CAFOs. For many CAFOs, controlling discharges to surface waters is largely associated with controlling storm water. Storm water discharges can be highly intermittent, are usually characterized by very high flows occurring over relatively short time intervals, and carry a variety of pollutants whose nature and extent vary according to geography and local land use. Water quality impacts, in turn, also depend on a wide range of factors, including the magnitude and duration of rainfall events, the time period between events, soil conditions, the

fraction of land that is impervious to rainfall, other land use activities, and the ratio of storm water discharge to receiving water flow. CAFOs are required to apply their manure, litter, and other process wastewaters to land in accordance with the site-specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients in the manure, litter, and other process wastewaters. The manure provides nutrients, organic matter, and micronutrients, which are very beneficial to crop production when applied appropriately. The amount or rate at which manure can be applied that ensures appropriate agricultural utilization of nutrients varies based on site-specific factors at the CAFO. These factors include the crop being grown, the expected crop yield, the soil types and soil concentration of nutrients (nitrogen and phosphorus), and the amount of other nutrient sources to be applied. For these reasons, EPA has determined that relying exclusively on numeric ELGs to control these discharges is infeasible. EPA has determined that the BMPs specified in today's rule represent the minimum elements of an effective BMP program and are necessary to control point source discharges to surface water. In this rule, EPA is promulgating only those BMPs that are appropriate on a nationwide basis, while giving States and permittees the flexibility to determine the appropriate practices at a local level to achieve the effluent limitations. The BMPs included in this rule are necessary to ensure appropriate agricultural utilization of nutrients in manure, litter, and other process wastewater.

EPA rejected establishing national requirements in this rule that would prohibit manure application to frozen, snow-covered, or saturated ground. As envisioned, the prohibition considered (but also rejected) at the time of proposal would have required CAFOs to install sufficient storage capacity to hold manure for the period of time during which the ground is frozen, snow-covered, or saturated. According to EPA's analyses, to meet such a requirement CAFOs in some areas, such as northern States, would need to be able to store manure, litter, and other process wastewaters for up to 270 days, depending on the amount of precipitation and severity of winter. In practice, such a prohibition could result in some facilities needing storage to hold manure and wastes for 12 months to allow for spreading manure at times

that coincide with crop growing periods.

EPA rejected establishing these requirements in the final ELGs because pollutant runoff associated with the application of manure, litter, or other process wastewaters on frozen, snow-covered, or saturated ground is dependent on a number of highly site-specific variables, including climate and topographic variability, distance to surface water, and slope of the land. Such variability makes it difficult to develop a national technology-based standard that is reasonable and does not impose unnecessary cost on CAFO operators. Further, given the site-specific nature of the cropland and runoff characteristics, quantifying the pollutant reduction associated with these requirements is difficult and imposing such requirements through a national regulation could divert resources from other technologies and practices that are more effective. Therefore, EPA believes that requirements limiting the application of manure, litter, or other process wastewaters to frozen, snow-covered, or saturated ground are more appropriately addressed through NPDES permit limits established by the permitting authority. Although EPA has decided not to include requirements limiting the application of manure, litter, or other process wastewaters to frozen, snow-covered, or saturated ground in today's rule, the permitting authority retains the authority and is encouraged to include these types of requirements as technology-based standards using BPJ in NPDES permits as appropriate.

EPA is establishing provisions at 40 CFR 122.42(e) for permitting authorities to include in NPDES permits a requirement for the CAFO to develop and implement a nutrient management plan. Under these provisions, NPDES permits are to include prohibitions, practices, and procedures to achieve compliance with 40 CFR part 412, when applicable, or effluent limitations based on BPJ when 40 CFR part 412 does not apply.

As discussed above in this section and in section IV.C.3, today's rule requires CAFOs to develop and implement a nutrient management plan. For Large CAFOs, this requirement is reflected in the effluent guideline as the BPT/BCT/BAT/NSPS limitations on land application discharges (see 40 CFR 412.4(c)). Other CAFOs are also subject to the requirement to develop and implement a nutrient management plan (see 40 CFR 122.42(e)(1)), although the permitting authority would establish precise elements of the plan, such as manure application rates, on a BPJ basis.